

IN THE CLAIMS

The following is a complete listing of the claims, and replaces all earlier versions and listings.

1.-30. (Canceled)

31. (Currently Amended) An image processing apparatus for encoding image data indicating an image including a first region and a second region, comprising:

an encoding unit, adapted to encode the image data at a first compression ratio to obtain first encoded image data, wherein the image data within the first region is encoded prior to the image data within the second region, said encoding unit terminating the encoding processing when a data amount of the first encoded image data exceeds a predetermined amount;

a detecting unit, adapted to detect whether or not the encoded data corresponding to the second region is included in the first encoded image data; and

a control unit, adapted to make said encoding unit encode the image data at a second compression ratio higher than the first compression ratio to obtain second encoded image data, when the encoded data corresponding to the second region is not included in the first encoded image data,

wherein said encoding unit is adapted to transform the image using discrete wavelet transformation, quantize the transformed image, bit-shift quantized data corresponding to the first region, so as to encode quantized data corresponding to the first

region prior to quantized data corresponding to the second region, and encode code of each quantization index using entropy encoding.

32. (Previously Presented) The apparatus according to claim 31, wherein said detecting unit is adapted to detect whether or not the encoded data corresponding to the second region is included in the second encoded image data, and said control unit is adapted to make said encoding unit encode the image data at a third compression ratio higher than the second compression ratio to obtain third encoded image data when the encoded data corresponding to the second region is not included in the second encoded image data.

33. (Previously Presented) The apparatus according to claim 31, wherein the first and second encoded image data are generated using quantization processing, and the change of compression ratio is done by a changing quantization step used in the quantization processing.

34. (Previously Presented) The apparatus according to claim 31, wherein the first compression ratio is fixed when the encoded data corresponding to the second region is included in the first encoded image data.

35. (Canceled)

36. (Previously Presented) The apparatus according to claim 31, wherein said detecting unit is adapted to detect whether or not encoded data indicating a block corresponding to the second region is included in the first encoded image data.

37. (Currently Amended) An image processing method encoding image data indicating an image including a first region and a second region, comprising:

an encoding step, of encoding the image data at a first compression ratio to obtain first encoded image data, in which the image data within the first region is encoded prior to the image data within the second region, said encoding step including terminating the encoding processing when a data amount of the first encoded image data exceeds a predetermined amount;

a detecting step, of detecting whether or not the encoded data corresponding to the second region is included in the first encoded image data; and

a control step, of making said encoding step encode the image data at a second compression ratio higher than the first compression ratio to obtain second encoded image data, when the encoded data corresponding to the second region is not included in the first encoded image data,

in which said encoding step includes transforming the image using discrete wavelet transformation, quantizing the transformed image, bit-shifting quantized data corresponding to the first region, so as to encode quantized data corresponding to the first region prior to quantized data corresponding to the second region, and encoding code of each quantization index using entropy encoding.

38. (Previously Presented) A computer readable storage medium storing a program making a computer execute an image processing method of claim 37.